

## **COVER PROP APPARATUS FOR BARBEQUE GRILL**

### **CROSS REFERENCE TO RELATED APPLICATIONS**

5        This application is a continuation-in-part of U.S. Patent Application Serial  
No. 10/229,617 filed on November 19, 2002.

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10        N/A

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### **BACKGROUND OF THE INVENTION**

#### **1. Field of the Invention**

20        The present invention relates to barbeque grills, and, more particularly to a  
barbecue grill cover prop apparatus for selectively propping a barbecue grill  
cover in a partially open configuration.

#### **2. Description of the Background Art**

30        Those in the Southern and Western United States define Barbecue (BBQ)  
as an outdoor festival at which a beef or hog is dressed whole and roasted on a  
spit over a pit fire. The popularity of the barbeque has remained undiminished  
since the 1700s, when Spanish explorers found West Indians smoking meat on  
wood frames called barbacoas. In the late 1800's cowboys of the West cooked

brisket, a tough, stringy piece of meat, over open fires while herding cattle on the range. Today, more than 500 barbecue competitions are held each year in the U.S ranging from small cook-offs at county fairs to major-league events such as the American Royal Barbecue Contests in Kansas City, Missouri. Many  
5 barbecue enthusiasts use specialized devices that smoke the meat slowly at a low temperature. To the purists, this is the only true barbecue; direct heat methods are, technically speaking, grilling.

Preparing food outdoors has become increasingly popular in the United States. As a result, simple coal or gas fired barbecue grills have continue to  
10 increase in popularity due to their convenience of operation, relatively instant availability for use in cooking, substantially even heat distribution and cooking of food, ease of clean-up and versatility to cook numerous varieties of foods.

Conventional gas grills consist of a cart or frame that supports a firebox. The firebox contains a burner assembly adjacent to a lower portion thereof and a  
15 cooking grid supported along the upper edge thereof. The firebox usually includes a hinged cover to create a cooking chamber. Lava rock is often disposed between the cooking grid and the burner assembly. The lava rock, acting as a form of a conductive member, absorbs the heat from the burning gas and provides a generally uniform heat producing means for the food being  
20 cooked. The grill is often supported by a frame, arranged and configured to substantially correspond to the firebox to support the grill thereon.

Coal fired barbecue grills also include a firebox and hood containing a metal cooking surface. The firebox functions to contain charcoal briquettes

beneath the cooking surface. One popular type of coal fired barbecue grill is referred to as a kettle-type grill, which utilizes a cooking chamber in the form of a barbecue kettle. A barbecue kettle may consist of a generally semi-spherical bottom bowl that has a circular opening with a cooking grid located slightly below the upper rim of the bowl. A generally semi-spherical top cover can be placed on the bottom bowl to enclose the barbecue kettle. The barbecue kettle is supported on a leg arrangement. One popular type of such a kettle grill configuration is a registered trademark of the Weber-Stephen Products Company.

Barbecue grill enthusiasts practice a wide variety of cooking styles and techniques. While some cooking styles call involve maintaining the firebox cover fully open or fully closed, there are a number of situations wherein it is desirable to maintain the firebox cover partially open. One disadvantage associated with conventional barbecue grills is that the firebox cover is limited to either fully open or fully closed configurations. Accordingly, there exists a need for a barbecue grill that overcomes the disadvantages present with conventional grills.

### **BRIEF SUMMARY OF THE INVENTION**

It is an object of the present invention to provide a cover propping apparatus for use with a barbecue grill.

Another object of the present invention is to provide a barbecue grill cover propping apparatus for adjustably maintaining a barbecue grill cover in any of a number of partially open positions.

Still another object of the present invention is to provide a universal barbecue grill cover propping apparatus that is suitable for use with a wide variety of barbecue grills.

Still further objects and advantages will become apparent from a  
5 consideration of the ensuing description and drawings.

### **BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWINGS**

FIG. 1 is a perspective view of a gas barbecue grill adapted with a cover propping apparatus according to the present invention;

10 FIG. 2 is a partial perspective view of the grill depicting the cover propping apparatus;

FIG. 3 is a partial detail view thereof;

FIG. 4 is a rear partial view thereof in a propped and locked configuration;

FIG. 5 is a rear partial view thereof in an unlocked configuration;

15 FIG. 6 is a side perspective view of a barbecue grill adapted with an alternate embodiment cover prop apparatus;

FIG. 7 is a partial rear perspective view thereof;

FIG. 8 depicts a perspective view of yet another alternate embodiment cover propping apparatus adapted for levered operation;

20 FIG. 9 is a perspective view of a barbecue grill with the cover prop apparatus depicted in FIG. 8 attached thereto;

FIG. 10 depicts a gas barbecue grill adapted with yet another alternate embodiment grill cover prop apparatus;

FIG. 11 is a perspective view of the grill cover prop apparatus depicted in  
FIG. 10;

FIG. 12 is a partial view of a grill adapted with still another alternate  
embodiment grill cover prop apparatus;

5 FIG. 13 is a perspective view of the grill cover prop apparatus depicted in  
FIG. 12;

FIG. 14 is another view thereof;

FIG. 15 depicts a gas barbecue grill adapted with another embodiment  
cover propping apparatus;

10 FIG. 16 is a perspective view of the cover propping apparatus depicted in  
FIG. 15;

FIG. 17 is a partial perspective view of a grill adapted with a ratcheted  
embodiment grill cover propping apparatus;

FIG. 18 is a perspective view thereof; and

15 FIG. 19 is a perspective view of an alternate embodiment grill cover prop;

FIG. 20 is an exploded view thereof;

FIG. 21 is a detailed perspective view thereof installed on a barbecue grill;

FIG. 22 is a partial exploded perspective view thereof; and

FIG. 23 is another perspective view thereof installed on a barbecue grill.

## DETAILED DESCRIPTION OF THE INVENTION

The invention will further be described with reference to the drawings wherein the same number in the various figures has identical meaning. FIGS. 1 – 5 depict a first embodiment barbecue grill cover propping mechanism according to the present invention, generally referenced as 10. Cover propping mechanism 10 is depicted in an installed and operative relation with a barbecue grill “G”. It should be noted that the cover propping mechanisms disclosed herein are suitable for use with gas, electric, or coal burning barbecue grills.

Propping mechanism 10 includes an elongate rigid member 12 and a base 14 adapted for attachment to a barbecue grill. Base 14 preferably includes first and second projecting members, referenced as 14A and 14B, which function to enable attachment of propping mechanism 10 to a barbecue grill as depicted in FIG. 2. The elongate rigid member 12 extends generally upward and is curved toward the rear of the grill. In addition, rigid member 12 defines an elongate slotted aperture 16 having a plurality of notches 18 as best depicted in FIG. 3. Slotted aperture 16 receives a spring-loaded propping knob 20 therein. Propping knob 20 includes a projecting shaft 22 having an end cap 24 for retaining a helical spring 26 disposed on shaft 22 as depicted in FIG. 2. Shaft 22 further includes a projecting key 23 which functions as a locking member for securing knob 20 as more fully explained herein.

Mechanism 10 is installed on a grill by attachment of base 14 to a side edge portion of the firebox as depicted in FIGS. 1 – 3. When mechanism 10 is

attached to a barbecue grill, the grill cover rests on a portion of shaft 22 in a supported configuration. Knob 20 is adjustably positionable along the length of rigid member 12 to allow for manual adjustment of the grill cover in any of a number of angularly disposed, partially open positions. As best depicted in  
5 FIGS. 4 and 5, shaft 22 includes a projecting key portion 23 which is removably received within any of the slotted aperture notches 18 thereby securing the knob at a user selected position on rigid member 12. Adjustment of knob 20 is accomplished by urging the knob outward (i.e. away from the side of the grill) against the force of spring 26 such that the shaft key is displaced from a notch  
10 18, sliding the knob to a user selected position, and allowing spring 26 to urge the knob back to seated position wherein the shaft key is received within a notch 18 on rigid member 12. As should be apparent, positioning knob 20 at various positions along rigid member 12 results in the grill cover being propped open a corresponding degree.

15 FIGS. 6 and 7 depict an alternate embodiment grill cover propping mechanism, generally referenced as 30. The alternate embodiment propping mechanism 30 is generally h-shaped, and includes an a base 32, having opposing legs 32A and 32B for attachment to the side edge of a grill, an elongate rigid member 34 defining a slotted aperture 36, and a grill cover propping knob  
20 40. As with the embodiment depicted in FIGS. 1 – 5, knob 40 includes a shaft 42 that is received in slotted aperture 36 as best depicted in FIG. 5. Shaft 42 includes circumferential teeth (not shown) which mesh with corresponding teeth defined at the periphery of slotted aperture 36 to enable vertical adjustment of

knob 40, and hence the grill cover, by rotation of knob 40. Knob 40 may be fixed at a user selected position along elongate member 34 by insertion of a locking pin 44 in apertures 38 thereby preventing vertical movement of knob 40 by undesired rotation thereof. A spring disposed on shaft 42 urges knob 40 toward  
5 elongate member 34 and into a locked configuration. Adjustment of the grill cover is accomplished by urging knob 40 away from member 34 such that locking pin 44 is displaced from any aperture 38, and rotating knob 40 such that the corresponding gear teeth cause vertical adjustment of knob 40 to a user selected position. Upon reaching the desired position, the user allows spring  
10 action to retract knob 40 such that locking pin 44 is received within a corresponding aperture 38 thereby fixing knob 40 in position along member 34 whereby the grill cover is propped open.

FIGS. 8 and 9 depict yet another embodiment grill cover propping mechanism, generally referenced as 50. Mechanism 50 includes an attachment  
15 clip 52 and a lever arm 54 pivotally connected to attachment clip 52. Lever arm 54 is preferably an angled piece of rigid material and includes a first end 54A and a second end 54B. Attachment clip 52 includes a locking set screw 53 which functions to facilitate secured connection of cover prop mechanism 50 to the upper side edge of the grill firebox. A knob, generally referenced as 60, is  
20 connected to the lever arm first end 54A. Knob 60 includes a projecting shaft 62 that receives a helical spring 64 disposed thereon as best depicted in FIG. 8. Spring 64 urges knob 60 to an operative position wherein shaft 62 is disposed under the edge of the grill cover. Mechanism 50 may be configured in a non-

operative configuration by urging knob 60 away from the grill cover and manipulating lever arm 54 such that the end of shaft 62 engages the side of the grill cover thereby permitting the cover fully close. Lever arm second end 54B includes a horizontally projecting flange 55 for providing a grasping structure that allows a user to actuate lever arm 54 to a position wherein knob 60 supports the grill cover in a partially open configuration as depicted in FIG. 9. A locking pin 66 may be inserted in a locking pin aperture defined in lever arm 54 and corresponding apertures defined in attachment clip 52 to secure lever arm 54 in a desired position supporting the grill cover.

FIGS. 10 and 11 depict yet another embodiment grill cover prop apparatus, generally referenced as 70. Cover prop apparatus 70 is rotationally actuated and includes a knob 72 securely connected to a generally circular shaft 74. Knob 72 preferably includes a peripheral edge defining a plurality of notches, referenced as 72A, which notches function to enable the user to securely grip and precisely rotate knob 72 during adjustment of apparatus 70. Shaft 74 is generally cylindrical and defines a circumferential recessed groove 76. Cover prop apparatus 70 is installed on a grill by partially raising the grill cover and positioning apparatus 70 such that groove 76 of shaft 74 engages both the upper side edge of the grill fire box as well as the lower side edge of the grill cover thereby maintaining the grill cover in a partially open configuration as best depicted in FIG. 10. When installed as depicted in FIG. 10, the grill cover may be adjusted by rotation of knob 72 thereby causing shaft 74 to travel along the edge of the firebox either toward or away from the rear of the grill. As should be

apparent, counterclockwise rotation of knob 72 will result in the grill prop apparatus traveling toward the rear of the grill thereby urging the cover to a more open configuration. Conversely, clockwise rotation of knob 72 will result in the grill prop apparatus traveling toward the front of the grill thereby allowing the cover to move to a more closed configuration.

FIGS. 12 – 14 disclose a hinge type embodiment of a grill cover prop apparatus, generally referenced 80. Prop apparatus 80 includes a base 82 and an elongate rigid portion 84 extending vertically from said base. Base 82 includes a pair of opposing legs, referenced as 82A and 82B, which function to facilitate clipped attachment of apparatus 80 to the side edge of a grill firebox as best depicted in FIG. 12. Rigid portion 84 includes a generally cylindrical vertical collar structure 86, similar to a hinge, and defines a series of vertically stacked, horizontal slotted apertures, referenced as 88A – 88E. A pintle, referenced as 90, comprising an elongate cylindrical member, is insertably received within hinge structure 86 so as to be capable of rotation relative thereto, and further capable of vertical adjustment by sliding relative to hinge structure 86 when in an adjustable configuration. Pintle 90 further includes a first radially projecting shaft 92 terminating in a knob 94 which function as a grasping member to facilitate adjustment of the apparatus. Pintle 90 also includes a second radially projecting shaft 96, angularly spaced from shaft 92, for supporting the grill cover. Once attached to the side upper edge of a grill firebox as depicted in FIG. 12, pintle shaft 96 projects toward the interior of the grill and supports the grill cover in a partially open configuration. Adjustment of the apparatus merely requires that

the user grasp knob 94 and manually rotate the pintle assembly from the position depicted in FIG. 13 to the position depicted in FIG. 14, whereby pintle 90 may be vertically adjusted. Once at the desired position the pintle assembly is reconfigured to a position similar to that shown in FIG. 13 such that first shaft 92  
5 is supported by a portion of hinge structure 86 corresponding to any of the positions 88A – 88E.

FIGS. 15 – 16 depict another embodiment for a grill cover prop apparatus, referenced as 100. Grill prop apparatus 100 generally includes first and second members, referenced as 102 and 104 respectively, connected by a hinge 106.  
10 First member 102 is adapted for attachment to a grill cover by mechanical or adhesive fasteners 108A and 108B. Second member 104 includes a plurality of inwardly projecting flanges, referenced as 110A – 110C, which cooperate with an inner surface of member 104 to create an angled niche for receiving the upper side edge of the grill firebox as depicted in FIG. 15. Hinge 106 is preferably  
15 spring loaded so as to bias second member 104 inward toward the firebox such that the angled niches formed by projecting flanges 110 and member 104 automatically engage the firebox upper side edge of the firebox as the grill cover is raised by the user. With grill prop apparatus 100 installed on a grill, member 104 and flanges 110 are disposed along side the firebox sidewall when the grill  
20 cover is in a closed position. Upon raising the grill cover, spring loaded hinge 106 urges member 104 toward the side of the grill fire box such that the upper side edge of the firebox may be selectively received between one of the flanges

110 and member 104 upon release by the user thereby propping the grill cover in a partially open position.

FIGS. 17 and 18 depict a ratcheted embodiment of a grill prop apparatus, generally referenced as 110, attached to a barbecue grill "G". Apparatus 110

5 includes a toothed ratchet wheel 112 connected to the grill cover hinge, and a lever 114 pivotally connected to the side of the grill firebox by a pivot pin 115 as best depicted in FIG. 17. Lever 114 has a first end portion adapted with a

projecting flange 116 that functions as a surface upon which a user actuates the apparatus. In addition, lever 114 includes a second end forming a pawl for

10 actuating ratchet wheel 112. Apparatus 110 functions to allow a user to position the grill cover to a plurality of open positions by actuating lever 114 by

depressing flange 116 on pivotal lever 114 such that pawl 118 causes

counterclockwise rotation of ratchet wheel 112. A mechanical connection

between ratchet wheel 112 and the grill cover transfers the rotational movement

15 to the grill cover hinge assembly thereby raising the grill cover. As should be apparent, incremental actuation of lever 114 allows for corresponding

incremental raising of the grill cover. A knob 120 connected to ratchet wheel

112, may further be used to manually raise the cover by rotation thereof.

FIGS. 19 – 23 depict another alternate embodiment considered to embody

20 the best mode of the present invention, generally referenced as 200. Grill prop

200 includes a first and second pivotally connected arms, referenced as 210 and

220, and an elongate adjustable rod 230. Rod 230 is telescopically adjustable to

facilitate use of the invention in connection with a variety of grill makes and

models having differing width dimensions. Arms 210 and 220 are preferably formed of metal of sufficient gauge and dimensions so as to be capable of supporting a heavy grill cover in an open position.

First arm 210 includes a first end 212 and a second end 218. First end  
5 212 defines a plurality of peripheral notches 214 and a generally centrally disposed aperture 216 for receiving a pivot pin, such as rod 230. Second end 218 is adapted with a projecting flange 219 for engaging the peripheral side edge of the grill fire box as best seen in FIG. 21.

Second arm 220 includes a first end 222 and a second end 228. The first  
10 end 222 of the second arm includes a slotted aperture 224 for facilitating pivotal mating engagement with the corresponding first end of the first arm. The second arm 220 further includes a projecting locking pin 226 adapted for being received within one of the plurality of notches 214 for fixing second arm 220 in an angular position relative with the first arm. More particularly, slotted aperture 224 allows  
15 for slidable relative movement in a radial direction between first and second arms 210 and 220 such that locking pin 226 may be selectively received in or removed from any of the plurality of notches 214 defined in first end 212 of first arm 210.

The instant invention has been shown and described herein in what is considered to be the most practical and preferred embodiment. It is recognized,  
20 however, that departures may be made therefrom within the scope of the invention and that obvious structural and/or functional modifications will occur to a person skilled in the art.